SteelEquivalents.com

Material datasheet
As of Aug 20, 2026

MATERIAL NUMBER 1.4000 · CLASS 1.4

1.4000

Chemical composition, mechanical and physical property values, and 54 standard designations from 15 regions.

DENSITY	OTHER DESIGNATIONS	PROPERTY VALUES
7.7 g/cm³	54 in 15 regions	9 on file

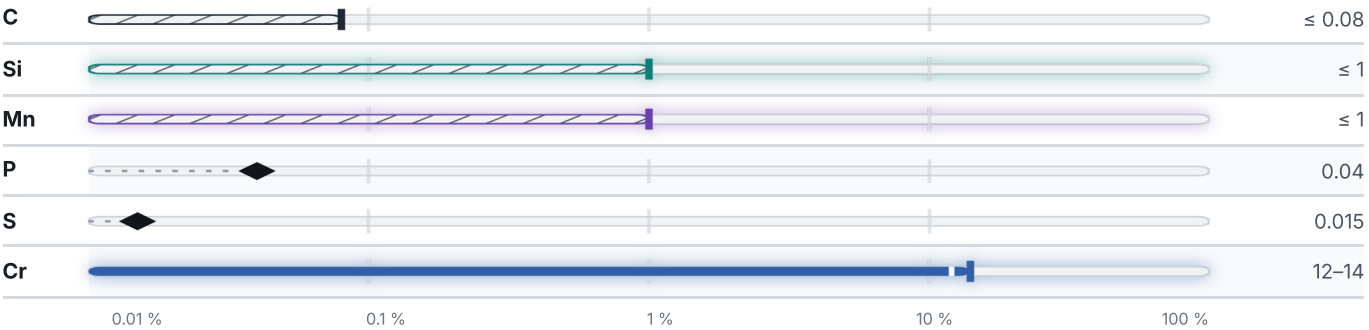
Chemical composition

Mass fraction in %

What this alloy is

Iron — the balance, never listed by a standard — 84.9 % · Cr — 13 % · Si — 1 % · Mn — 1 % · Traces & impurities · 0.1 %

Logarithmic scale, 0.01 % to 100 % — every value here compares directly, decade by decade.



The scale is logarithmic, not the element's raw share of the alloy — the only honest way to fit 0.01 % and 100 % in one picture, and it means every value here can be compared with every other.

Predicted transformation temperatures

Not enough recorded composition to predict a transformation temperature for this grade — missing: Ni, Mo.

Mechanical properties

42 values across 8 conditions

CONDITION · DIMENSION	RM N/mm²	A5 %	HB
Pipe cooling strain, GOST 9941-81	372	22	–
Pipe hot strain, GOST 9940-81	372	22	–

CONDITION · DIMENSION	RM N/mm²	A5 %	HB
08KH13 (08X13) (quenching, tempering) , GOST 25054-81	–	–	187–229
08KH13 (08X13) (annealing) , Bar GOST 5949-75	–	–	116–179
08KH13 (08X13) (normalize, tempering) , Bar GOST 18968-73	–	–	187–217

CONDITION · DIMENSION	RM N/mm²	RE N/mm²	A %	Z %	AK J/cm²	HB	HRB	HV
Plate/Sheet Hot-rolled	440	205	20	–	–	–	–	–
Bars/Rods	590	390	25	55	147	–	–	–
Hot-rolled	–	–	–	–	–	201	93	210

CONDITION · DIMENSION	RM N/mm²	RE N/mm²	A5 %
Sheet trick, GOST 7350-77	650	250	15
Sheet thin, GOST 5582-75	410	–	21

SOFT ANNEALED	HB
Soft annealed	200

CONDITION · DIMENSION	RM N/mm²	RE N/mm²	A5 %	Z %	KCU kJ/m²
Bar, GOST 5949-75	590	410	20	60	980

CONDITION · DIMENSION	RM N/mm²	RE N/mm²	A5 %	Z %	KCU kJ/m²
Bar, GOST 18968-73	580	410	20	60	980

QUENCHING AND DRAWING	RM N/mm²	RE N/mm²	A5 %	Z %	KCU kJ/m²
to 600	539	392	14–17	35–50	490–830

CONDITION · DIMENSION	RM N/mm²	RE N/mm²	A5 %
Sheet trick, GOST 7350-77	420	295	23

Physical properties

3 values

CONDITION · DIMENSION	RHO g/cm³	E GPa	ALPHA 10^-6/K	LAMBDA W/(m·K)	CP J/(kg·K)	RHO_EL nΩ·m
20	7.76	217	–	–	–	506
100	7.74	212	10.5	28	462	584

CONDITION · DIMENSION	RHO g/cm³	E GPa	ALPHA 10^-6/K	LAMBDA W/(m·K)	CP J/(kg·K)	RHO_EL nΩ·m
200	7.71	206	11.1	28	–	679
300	–	198	11.4	28	–	769
400	–	189	11.8	28	–	854
500	–	180	12.1	27	–	938
600	–	–	12.3	26	–	1021
700	–	–	12.5	26	–	1103
800	–	–	12.8	25	–	–

PROPERTY	VALUE	UNIT
Density	7.7	g/cm³

Technological properties

PROPERTY	VALUE	UNIT
Weldability	limited weldability.	
Temper brittleness	predisposed	

Designations across standards

54 designations · 5 documented as identical

United States 17

S40300 This grade's own name	uns
S41008 This grade's own name	uns
403 This grade's own name	aisi-sae
4105	aisi-sae
410S This grade's own name	aisi-sae
429	aisi-sae
51403	aisi-sae
S40300	aisi-sae
S40500	aisi-sae
S41008	aisi-sae
Type403	aisi-sae
A176	astm
A276	astm
A314	astm
A479	astm
A511	astm
A580	astm

Russia / CIS 6

08Ch13	gost
08KH13	gost
08Х13	gost
08Х13	gost
0Х13	gost
ЭИ496	gost

Europe 5

1.4000	din-en
Type403	din-en
X6Cr13 This grade's own name	din-en
X7Cr13	din-en
X7Cr14	din-en

France 5

410F90	afnor
Z6C13	afnor
Z8C113FF	afnor
Z8C12	afnor
Z8C13FF	afnor

Japan	5
SUS 403	jis
SUS 403FB	jis
SUS410	jis
SUS410S	jis
SUS429	jis

Spain	3
F.3110	une
X6CM3	une
X6Cr13	une

China	3
0Cr13	gb
1Cr12	gb
OCr13	gb

Italy	2
X6CM3	uni
X6Cr13	uni

Poland	2
0H13	pn
OH13	pn

United Kingdom	1
403S17	bs

United States / Aerospace	1
5614	ams

Sweden	1
2301	ss

Czechia	1
17020	csn

Slovakia	1
17 020	stn

Serbia	1
Č.4170	srps

Note on use. The data is compiled to the best of our knowledge from publicly available standards and manufacturer documentation. It replaces neither material testing nor an inspection document to EN 10204. Please request a mill certificate to EN 10204 2.1, 3.1 or 3.2 together with your enquiry. The standard in its current valid edition always prevails.

DATASHEET ONLINE	GRADE SEARCH	MATERIAL NO.	ISSUED
View the material page	Search all grades	1.4000	Aug 20, 2026